AMERICAN FARMER

Established 1819,

BY

JOHN S. SKINNER,

BALTIMORE, MD.

AGRICULTURE, HORTICULTURE, RURAL AND HOUSEHOLD ECONOMY.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT AGRICOLAS." . . . . . VIRGIL.

SEVENTH SERIES. JANUARY, 1870. VOL. I.—No. 1.

A MONTHLY MAGAZINE.

N. B. WORTHINGTON..*Agricultu'l Editor.*
FRANK LEWIS.....*Publisher.*

No. 4 SOUTH STREET, Baltimore, Md.

$1.50 A YEAR, IN ADVANCE.

THE OLDEST AGRICULTURAL PUBLICATION IN THE UNITED STATES.

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Baltimore Markets, Dec. 25, 1869.

COFFEE.—Rio, 13¾a18¾ c., gold, according to quality: Laguayra 16a18½ cts., and Java 22a23¾ cts., gold

COTTON.—We quote prices as follows, viz:

Grades.	*Upland.*	*Gulf.*
Ordinary	23 a—	00
Good do	23¾a—	00
Low Middling	24¼a24¾	00
Middling	24¾a—	00

FERTILIZERS.—Peruvian Guano, $78a—; California, $70; Rodunda Island, $30; Patapsco Company's, $60; Reese & Co's Soluble Pacific Guano, $60; Navassa Guano, $30; Chesapeake Guano, $60; Flour of Bone, $60; G. Ober's (Kettlewells) AA Manipulated, $70; A do. $60; Ammoniated Alkaline Phosphate, $55; Alkaline Phos. $45; Baltimore City Company's Fertilizer, $40; do., Flour of Bone, $60; do., Ground Bone, $45; do., Poudrette, $25; Baugh's Raw-bone Phosphate, $56; Baugh's Chicago Bone Fertilizer, $48; Baugh's Chicago Blood Manure, $48; Maryland Powder of Bone, $48; Rhodes' Super-Phosphate, $50; Rhodes' Orchilla Guano, $30; Lister's Bone Super-Phosphate $55; Berger & Buts's Super-Phosphate of Lime, $56; Andrew Coe's Super-Phosphate of Lime, $60; Zell's Raw Bone Phosphate, $56; Zell's Super-Phosphate of Lime, $60—all per ton of 2,000 lbs.; Ruth's Challenge Soluble Phosphate, $60; Whann's Raw Bone Phosphate, $56. Pure Ground Plaster, $14.75 per ton, or $2.25 per bbl. Shell Lime slaked, 6c., unslaked, 10c per bushel, at kilns.

FLOUR.—Howard Street Super, $4.75a5.00; High Grades, $5.62a6.00; Family, $6.25a6.75; City Mills Super, $5.25a5.75; Baltimore Family, $8.75.

Rye Flour and Corn Meal.—Rye Flour, $5.00a6.00; Corn Meal, $4.75.

GRAIN.—*Wheat.*—Good to prime Red, $1.30a1.36; White, $1.35a1.40.

Rye.—$1.00a1.05 per bushel.

Oats.—Heavy to light—ranging as to character from 55a56c. per bushel.

Corn.—White, $0.84a0.87; Yellow, $0 80a0.90 per bushel.

HAY AND STRAW.—Timothy $22a23, and Rye Straw $22 a— per ton.

PROVISIONS.—*Bacon.*—Shoulders, 15a15½ cts.; Sides, 18a19¾ cts.; Hams, 20a21 cts. per lb.

SALT.—Liverpool Ground Alum, $1.80a1.90; Fine, $2 60 a$2.80 per sack; Turk's Island, 50 cts. per bushel.

SEEDS.—Timothy $4.25a4 50; Clover $8.50a0.00; Flax $2.25.

TOBACCO.—We give the range of prices as follows:

Maryland.	
Frosted to common	$5.00a 5.50
Sound common	7.00a 8.00
Middling	9.50a11.00
Good to fine brown	11.50a15.00
Fancy	17.00a30.00
Upper country	7.00a35.00
Ground leaves, new	5.00a11.00
Ohio.	
Inferior to good common	4.00a 6.00
Brown and greenish	6.00a 8.00
Medium to fine red and spangled	9.00a12.00
Fine spangled	12 00a25.00
Fine yellow and fancy	30.00a40.00

WOOL.—We quote: Unwashed, 30a33 cts.; Tub-washed, 49a51 cts.; Pulled 30a33 cts.; Fleece 49a45 cts. per lb.

CATTLE MARKET.—Common, $4 00a5.00; Good to fair, $5.00a6.00; Prime Beeves, $8.00a8.75 per 100 lbs.

Sheep—Fair to good, 5a8 cts. per lb., gross.

Hogs—$13.25a14.25 per 100 lbs., net.

Wholesale Produce Market.

Prepared for the American Farmer by HEWES & CO., *Produce and Commission Merchants, 67 Exchange Place.*

BALTIMORE, Dec. 29, 1869.

BUTTER.—Western solid packed 20a24 cts.; Roll 28a37; Glades 25a45; New York 40a45; Franklin street 35 cts.

BEESWAX—35a40 cts.

CHEESE.—Eastern, 17a18¾; Western, 16a17 cts.

DRIED FRUIT.—Apples, 7a8; Peaches, 8a15.

EGGS—40 cents per dozen.

FEATHERS.—Live Geese, — to — cents.

LARD.—Western, 20¾; City rendered, 21 cts.

TALLOW.—10a11 cents.

POTATOES.—60a70 per bushel.

Agricultural.

CHRISTMAS.

"The helmed Cherubim
And sworded Seraphim
Are seen in glittering ranks, with wings displayed,
Harping, in loud and solemn choir,
With unexpressive notes to Heaven's new-born Heir.

"Such music as ('tis said)
Before was never made,
But when of old the Sons of Morning sung,
While the Creator great
His constellations set
And the well-balanced world on hinges hung."

Work for the Month.

JANUARY.

The new year comes upon us in wintry guise, and all suggestions from outside remind us only to keep ourselves and all about us comfortable. The wind and the snow, the hail and the rain, with Jack Frost following in their blustering track, give us no thought but that of guarding against their intrusion. The farmer who takes care for himself and his family, looks next to the comfort of his nearest neighbours who may need help.—These are commonly his dependents and fellow-creatures of the stock-yard. He is their good providence, and as he is comforted and provided for, by One to whom he looks, so should he provide for the humble ones, who have no other helper. "The merciful man is merciful to his beast."

And this charity is his best worldly wisdom. All the teachings of science agree with our common sense, that the best thrift is where there is the most comfort. The cow that is protected from storms of wind and snow and rain, will, other things being equal, give the most and the best milk, for the sufficient reason that elements of food which should make good milk, are not taxed first, to keep up the necessary warmth of the body. And however well protected the cow may be, protection is not enough without suitable food, and that in sufficient supply. Suitable food is that which she likes best generally, because it is that which is most needed to supply the general waste of the body. The appetite craves that above others. And so it is with the animal that works, or is growing, or that is only getting fat; each wants that which his bodily need demands. It is an exercise of judgment to supply these, and this judgment, will always find a useful guide in the appetite of healthy animals. It will be generally found safe to please this, and so make the receiver of your charities very comfortable.

While the hand finds least to do without, the mind should be busy in reviewing the past year, and in anticipating that which is to come.

FARM ACCOUNTS.

Look well to these, and learn from them, where have been the profits and where the losses of the past year, and ascertain whence have arisen the one and the other. Has it been your own fault or that of the crop. Was there too little manure, unfaithful ploughing in the preparation, careless or unsufficient afterworking, losses from want of promptness in sowing, or were the losses only such as are commonly incident to the season—the fault not in your management or the character of your crop? These are matters to be considered in taking a look back over the season past. For the future it is to be determined what crops are to be made, and how much land set apart for each; what manures to be supplied; what renewal of stock and implements; what plan of rotation, &c.

Take an account of your stock in trade for the past season, and ascertain what it has paid you for interest and for your own services. In doing so, give the farm credit for house rent and fire-wood, fruit, vegetables, meat, bread, and whatever else it has furnished for the use of the family. Let it have all the credit it is entitled to, and throw in a little for the fresh air and good water, the health, and quiet and peace of country living, before determining that farming does not pay.

Make a careful estimate of necessary expenses and provide in advance to meet them.

WINTER PLOUGHING.

Take any opportunity which absence of frost may afford to break up any old sward that you mean to cultivate, or clay-lands that need exposure to frost. The team will be now more able to do such work than in the spring; you will be more likely to plough deeply and will do so with less risk of injury from bringing up the subsoil.

TOBACCO.

Use every suitable opportunity to prepare the crop for market. The master's eye is worth more than his hands in stripping, but he may well use both, if he will take his stand where the workers under him, will expect his supervision. Let him see that the several qualities are properly sorted, and laid down carefully, instead of being carelessly thrown in the dirt or tumbled and ruffled in handling.

TOBACCO BEDS.

At any time when the ground is in order to be worked, tobacco beds may be prepared and sowed. Such opportunity should be availed of, not because it is desirable to sow so early, but that you may make sure of getting all sown in due time; for sometimes unfavorable weather in spring postponed the sowing to too late a time.

Ground just taken out of the wood needs burning to put it into proper condition for the seed. Brush and old wood for this purpose may be gathered at any time and had in readiness for use. On old land it is customary to use Peruvian Guano largely—say at the rate of seven or eight hundred pounds to the acre.

A rich loam is best for tobacco plants. Select a spot on a South hill-side, well protected by wood or shrubbery. This protection guards both against cold winds and the destructive fly. After burning, dig deep, and continue to dig and rake and chop, until every clod is reduced, and root and stone removed. Then level and rake nicely. Mix the seed with ashes or plaster, to distribute it well, sow regularly and tramp with the feet as firmly as it can be done.

CLOVER AND GRASS FIELDS.

Guard these well during the season. Well set fields of turf are not seriously hurt by the treading of stock in ordinary winter weather. But clover fields should never be trod by stock. So valuable a crop as clover, the foundation of all economical farm improvement, should be guarded against every possible hindrance to its most perfect development. The crowns of the plants are liable to injury from the tread of animals, and it should not be trespassed on, until it is necessary for feeding them; good managers will not allow that necessity to occur until the crop is well grown.

MANURES.

Gather material for manure from all available sources. The stock should, of course, be provided with all the litter that can be disposed of for bedding and in absorbing the moisture. Beyond this, use the coarse stuff in compost with lime or ashes, to the extent that compost may be needed; but where labour must be saved, all such matter may be advantageously taken to the ground where it is to be used, and spread at once for a top-dressing. It will in no other way be more effective.

LIME, ASHES, &C.

Fertilizers of this kind should be bought early, and may be spread at any time upon the surface where needed. Lime especially should be put upon the ground some months before it is broken for a crop; it is better it should be spread six months even, in advance of the ploughing. The only exception that should be made now, is in its application to such ground as must be broken early in spring. In such case, it is better to wait and apply immediately after ploughing and harrowing.

FIRE-WOOD AND FENCING MATERIAL.

Cut now all of next winter's supply of fire-wood, and the material for renewing old fences and making new ones. Take the latter to the yard if preparation for putting together is needed, or immediately to the line of the fence.

The Vegetable Garden.

In the garden as on the farm, there is little of actual work to be done during the month, unless the weather should become very unusually mild and drying, so that digging and other preparations for spring may be begun. We may, however, be occupied now in laying out spring work. Let there be a plan of the garden drawn on paper, for the purpose of more readily designating or arranging any improvements, and planning the operations of the season that is approaching. If a new garden is to be made or there is to be a new plantation of fruit or ornamental trees, now is the suitable time for making the necessary arrangements and for making and maturing the plans on which they are to be carried out.

DIGGING THE GROUND.

When the ground is unfrozen and sufficiently dry, use every opportunity of digging and manuring for the early vegetables. Composts should have been prepared in advance, as they are necessary for most of the crops of the garden. Take them to the ground when fit for use, at any convenient time.

EARLY PEAS.

Some of the earlier sorts of peas may be planted whenever the ground can be got in

order. After planting, lay brushwood along the drills, to remain until the peas come up. The early planting will, under ordinary circumstances, be found to advance materially the season of consumptiun.

POTATOES.

Potatoes may be planted for early use, if well covered with long litter in the drills.

HOT BEDS.

Get materials for these in readiness. The frames, sash and glass should be all got ready for use when needed.

Our Blue Grasses.

While it is wise to hunt up good things, even in the ends of the earth, we have a fancy for such as lie around us, and think we should keep our eyes more open to the merit of home products. We have in this country few good pasture grasses while the English are so alive to the value of variety in making up their pasture grounds, that they make out a long list that are well known to the farmer.

We have here native, not in Maryland only, but perhaps in all the States, yet suiting some soils better than others, two grasses of very great value, which are appreciated only in localities. The blue-grass pasture fields of Kentucky are very famous, but in other regions where the same grass grows as naturally as there, it is hardly known as the same thing, or to have any considerable value. The blue-grass pastures of Loudon and Fauquier counties, Va., are almost as much prized, though not constituted of the same grass as the Kentucky pastures, yet are as familiar and well known.

These two grasses the *poa pratensis* and *poa compressa* of botanists, have been sometimes supposed to be the same, only varying with soil and climate, but the difference may be plainly seen in their general appearance, and especially on minute examination. They differ also in the quantity and the quality of the grass, the Kentucky blue-grass yielding more and perhaps richer pasturage. It is of a deep green color, the stem growing from one to two and three, and, sometimes, even four feet, erect, round and tapering. The Maryland blue-grass is of a bluish green, the stem growing as much as twelve to eighteen inches high, bending at the base, and compressed or or oval in shape. The Kentucky blue-grass has numerous long, tender, deep green, linear leaves, from one to two and three feet long, growing up from the root of the plant. The Maryland grass has no radical leaf at all, no leaf except the small one growing out from the stem.

While the very valuable Kentucky blue-grass has become famous, chiefly from the widely known pasture grounds of that fertile State, and seems to attain there its most perfect development, it grows well in other sections and we do not doubt might be made profitable in the limestone regions, especially, of Maryland. It was in Chester Co., Penn., where it was known to the eminent botanist, Dr. Darlington who called it *optimum pabulum*—unsurpassed in the qualities of a forage plant.

Where the Maryland blue-grass grows freely, it comes, to some extent, in the third year from the seeding of the ground to clover. The second year the clover comes to perfection, and the third begins to give way, and the blue-grass to take its place in a measure. If the ploughing for wheat be left to this time the fallow, unless very deeply ploughed, will be infested with blue-grass. On each succeeding year it thickens until a close turf is formed. If the seed of the Kentucky blue-grass were sown with the clover seed it would take probably the same course, and get the benefit of the ameliorating qualities of the clover. In all cases where an attempt is made to grow it, the ground should have been limed and otherwise in good condition.

Another method of setting the ground with this grass which would seem to promise speedy success, is to sow the field-pea broad-cast for improvement, and early in September sow a half bushel of rye and a thick seeding of blue-grass, and then feed and trample the crop of peas with stock. This will both cover and protect the grass seeds, and a good set of grass would probably follow immediately after the rye. Clover may be, and, in all cases, we think, should be sown at the same time, or the spring following.

But our own familiar blue-grass, the pest of the corn field and wheat field, commends itself to our empty purses, for it needs no outlay for seed. It will come surely in due time; and even on quite poor grounds makes a good, perhaps the best, sheep pasture, and increases and thickens with the fertility of the soil. So our poorest fields with such moderate help as we may be able to give, may be turned out first to sheep grazing, and in time become suitable for heavier stock.

We assume that much of our land must be turned to pasturage, and the first question with most of us who are under this necessity is, how can we do it cheapest? The common blue-grass makes a poor show in the start, but let them who despise, get a look at some of the hundred-acre fields of the blue-grass region of Virginia, untouched perhaps by the plough for a half century, and they will learn a lesson that will serve them well.

More Dairy Farming.

Smaller grain fields and larger pasture fields should be the aim of our Maryland and Virginia landholders. Not that it is necessary or desirable to make less grain, but to make the same, or more, on fewer acres, and so make more direct profit from the grain and leave more acres free for other uses. We all know by this time how this to be done. Good working, abundant manuring and continual clover growing are the chief things, and the constant aim to make each acre produce about as much as it can.

Nor would we have stock to multiply upon a grain farm without a definite aim, and a purpose of special profit from each one that is allowed its life. We have seen calves and pigs multiplied without number, merely, it would seem, because they were calves and pigs, without due provision and without reasonable expectation it would seem that they could be any thing else than a trouble. We know that farmers often keep a dozen cows that give no more milk, take the year through, than three good ones should, and a half dozen sows to do the breeding of half that number. These practices belong to a style of farm management that all good farmers are trying to work out of. It is no such stock raising that we would have encouraged, but stock raising that can be made to show a definite, a positive result, in independent profits. We should all aim at this and look about to see how best it can be accomplished.

Of the several methods of diverting disposable land and labour in the direction of stock raising, none would seem to fall in so readily with established arrangements as the dairy. Every farmer's family is engaged in dairying to some extent, and with all, there is a degree of familiarity with the details of dairy management. Every one therefore has made a beginning, and needs only to extend and enlarge his operations. That increase of dairy products to an unlimited extent can be made profitable under skillful management would appear from the price of even common butter and the very large price of that which is really good.

It is a great reproach to our farming that the supply of good butter to be found in all the markets, is so very small, and to Maryland farming especially that the Baltimore market is supplied in very large proportion from outside states. When farmers give their attention more directly to this business, as a regular source of income, the quality will improve with the quantity, and the demand for the good will be found to increase with the supply.

The public taste for butter is now, indeed, very depraved, and even well raised people content themselves sometimes with what should pass for very indifferent grease. Witness constantly our places of public entertainment. We are not an advocate of luxurious living, but in the matter of so necessary an item of our daily food, it would be a great step in the path of improvement, to have a lively demand for butter of the best quality. And that demand will surely grow with the supply. People constantly submit to what they cannot remedy, and their tastes become accommodated to what they are accustomed to, but they recover their powers of discrimination, and there needs only that the good be furnished to have them soon find out that it is good.

From butter making it is an easy step to cheese making, and there is no cause whatever we suppose that forbids a production of this valuable article of food.

As to the profit of dairy products generally we believe they need not be doubted when we consider the prices at which for many years they have sold. A writer in a western journal is urging even upon the grain growers of the West, the advantage to them of such a change as we here suggest, and compares the results of their present mode of farming with that of the state of Vermont, to the advantage of the latter. He says: "In 1860, Michigan produced 8,313,185 bushels of wheat, a little more than one-twentieth of the whole amount grown in the United States. Of cheese in the same year, it produced only 2,009,064 pounds. The little state of Vermont with an area about two-elevenths as great produced 8,007,000 pounds of cheese, but only 431,127 bushel of wheat. That Vermont did not grow so little wheat because her soil is not adapted to wheat culture, is shown by the

fact that the average yield of wheat per acre in Vermont as shown by the report of the Department of Agriculture, January, 1865, was fourteen bushels per acre, while in Michigan the average yield per acre, was twelve bushels for the same year. Thus it is seen that the farmers of Vermont can grow fourteen bushels of wheat on the same quantity of land that the farmers of Michigan get but twelve, yet they prefer to give attention to dairy products to the almost entire neglect of wheat. This is because they find dairy farming more profitable."

Looking to the fact, which is now apparent, that the lands of Michigan are fast losing their original fertility, and that it is getting "sick" of the constantly recurring use of clover and plaster, he urges, that by giving to wheat no more than its due share of attention, by keeping a large portion of the land in meadow and pasture and root crops, and feeding the produce to animals, either for dairy or the shambles, farmers will surely reap as large immediate returns as when wheat is the main crop, and probably much larger, and can by the aid of a large amount of manure which they will manufacture, keep their lands in excellent condition. The same course of reasoning is more applicable to Maryland, where a large proportion of our lands need a restoring course of management, and we have excellent markets at our doors for all we can produce.

Manure for Cotton—Where to put it.

We are indebted to Mr. Crichton for the following letter from an experienced cotton planter on the interesting topic indicated above:

MADISON, Morgan Co., Ga., Nov. 27, '69.

Wm. Crichton, Esq., Baltimore.

DEAR SIR: Your letter and the "Carolinian" were duly received a day or two ago. I have read the article to which you refer, and agree with it, that surface fertilizing is proper and fit for all plants that sustain themselves by *surface roots*. Corn, wheat, tobacco and grasses belong to this class of plants, but cotton, clover and peas belong to another class, and have tap roots as well as surface roots, and require a different application of manures.

Many persons will tell you that these tap-rooted plants send down their taps deep in the earth only to obtain moisture, and thus sustain themselves in times of great drought. This may be true, but at the same time these taps live to eat plant food, as well as to drink moisture, and when drought comes to such an extent that the surface roots are incapable and disqualified to get their daily bread, there the old *radix* does the needed work for the whole plant, and hence, he who does not prepare his land and fix his plant food deep in the earth, fails to meet the emergency and the necessity.

Individuals are not more sensible and tenacious of the good things of life than are plants.

In your pilgrimage through life you eagerly seek the store-house where you get the food and the comforts which promote growth and give you ease and pleasure, though you have to make sacrifices to obtain these blessings. And it is so with these tap-rooted plants; a dry season and a fervid sun will make the tap hasten up to reach the store-house, though deep it may be in the earth, to get the food and shelter in which it may luxuriate and grow and attain an enviable perfection.

Then, I say, put your plant food for cotton in the earthy store-house and cover it deeply with well pulverized soil where the sun's rays cannot break through, annoy and steal, and as sure as God has made laws to propitiate the vegetable kingdom, you will as surely attain the end for which you strive.

I lay it down as true, that experimental philosophy is the only sure method of investigating the laws of nature. We can only at best collate facts, and then draw deductions which we call reasoning—but without these facts, obtained from experiment, our agricultural knowledge is futile. We want the actual food for plants, and then we want the media by which this food is conveyed to the vegetable kingdom, and we want to store in this media a sufficiency for growth, maturity and perfection, and nothing but experiments can acquaint us with the character of our soil under our varied and diversified seasons, the character of the food for the particular plant and the depth of our store-houses in which to place the needful food, and the management and cultivation of our soils and crops.

My experiments prove that all tap roots should have their food placed deep in the earth, beyond the influence of a scorching sun, and where it can be consumed in the hour of stress, when its vitality mostly needs the invigoration in the perfection of its fruits.

The tap roots, as well as surface roots, needs care and sustenance in infancy more than they can draw from a feeble and exhausted mother earth, and should be fed to give an early and strong growth. But the greatest support must be given when blossoms and fruit are being developed, or else they fall off and wither, and never come to perfection.

Fertilizers placed near the surface of the earth may, and will be injured by the heat of the sun in dry seasons—and in wet seasons they encourage too great a growth of grass and weeds, and require more labor in the cultivation, and do not minister to the tap root, which requires, as I have said, both food and moisture at a time when they are mostly needed, nay positively required.

The question is often asked, if tap roots require their food deep in the earth, why did not God make the soil deeper down, and not on the surface? I answer he *did* make deep soils wherever the tap roots are indigenous. Witness the cotton plant at home, in Abyssinia, on the deep soils of the Nile, and in the alluvium of the Burrampooter and Sampoo rivers. Look at our own Mississippi valley, and the great Amazon bottoms.

I fear, my dear sir, that I weary and worry you.

Experience teaches us that holes dug in the earth four feet apart and two to three feet deep, and filled with manures and covered with the clay from these holes, produce cotton in any season without a failure, if the frosts do not come too early. The plant, stimulated in germination and in its infancy in this clayey covering, soon sends its roots and taps into this manure, and the crop is sure.

I am one of the farmers who do not believe in the doctrine of fertilizers leeching into the earth, and in this way being lost in its value. I admit that long continued rains may and do take from manures a lye which is absorbed by the earth, and there digested in this great alembic of nature, and thus goes back to the soil to produce vegetation. If manures and prepared soluble fertilizers were thus leached, our subsoils would be our most valuable lands, and the country which was most surcharged with water would be our most productive earths, and the subsoils of our bogs would be our transportable guanoes. You perceive this theory is not up to the standard of facts.

My experience of nearly forty years will guide me in the future to bury all manures deep in the earth that we use for summer crops, no matter if the plants be surface or tap roots, but especially deep for the tap root plants, and to surface manuring for all winter crops that ripen in the early spring, ploughed in as we sow the winter and spring grains.

I have great apprehensions that this letter will not meet your expectations nor supply the information you desire. Let me close, my dear sir, with an assurance to you, that I shall ever appreciate the acquaintance made, and would be happy to cultivate and still more cherish that acquaintance.

Very truly and sincerely,
Your most obedient,
JOHN B. WALKER.

Devonshire Butter.

Peculiar customs in different localities lead to varieties in the quality and price of butter, irrespective of cleanly habits. Devonshire butter and cream owe their reputation to some curious dairy practices, more than to the superior richness of their pastures. The milk, instead of being left to cream in a cool place, is placed in large, deep pans, and warmed on an iron plate over a slow fire. Of course a thick scum rises on the milk, which is removed from time to time with a spoon. When the first bubbles appear before boiling, the milk is taken off and allowed to cool. The thick part is then removed, and the famous clouted cream (nearly as thick as butter) is the result.

The butter made from this cream is so highly esteemed, that much is palmed off as such in the market. It is said that the *butter of Holland* is superior to that of any country, and forms about three-fourths of all foreign butter imported.

The quality and quantity of butter may be much increased by greater care as to even temperature and pure air of the milkroom, and in choice of kind and quality of milk vessels. China pans are the best, because easiest to keep sweet; and those with a large surface and shallow, will permit all the cream to rise quickest.

An experienced writer gives the following estimate of the quantity of butter produced by a good English cow: "A good cow should produce eight pounds of butter per week in summer, and half of that in the winter, allowing from six weeks to two months for her being dry before calving. If she produce more, she is a superior cow; if less, below par. To produce this quantity, the pasture must be good. Three acres should keep a cow in grass and hay for the year."

Good butter is healthful, delicious and inviting; but nothing can be more injurious to the system, or more disgusting to the palate, than the rancid, foul, greasy stuff piled into our groceries, and sent to many a table as an apology for the genuine article.—*Co. Gent.*

The Chemistry of Clover.

The value of clover as a fertilizer, for wheat especially, has been long known in Europe and this country, practically. It would be hard to estimate how much land, even in the small State of Maryland, has been lifted from the lowest depths of poverty to a high degree of fruitfulness by the use of clover alone, and the little dust of gypsum the clover is supplied with. Everybody knows this, and all avail themselves of the knowledge so far as they can. Clover is in common use where it is supposed to be available, but not so much as if our knowledge of it were more accurate. The leading facts as to its production in certain favorable conditions of the soil, and of its value in improving a certain class of soils, and of its direct effect in fertilizing the wheat crop, are common property, but there is no doubt much more to be learned of it than can come of mere observation of apparent facts, and for this we must be indebted to scientific investigation.

Some time ago we were alarmed a little by the suggestion of Liebig that the effect of clover must be eventually exhausting to the soil, and even to the subsoil, beyond other crops, because of its striking so deeply into the subsoil and pumping up to the surface the mineral elements that lie below the range of shallow-rooted plants. This was rather a speculation, however, than a fact that need influence us practically. For our own part, we think the day is so far off in which we are likely to suffer from an exhausted soil that we need give ourselves no uneasiness about it.

Professor Voelcker has been for many years past making the clover plant the subject of special study, and he takes a more cheerful view of the matter, even to the extent of such a seeming contradiction as this, that it is, at the same time, the most exhausting and the most improving of all crops. On comparing the large amount of mineral matter and of nitrogen removed in a crop of clover hay "with what is removed by a crop of wheat, it is found that in a clover crop there are fully three times as much mineral matter and more than six times as much nitrogen removed as there is in a crop of wheat." Yet clover is notoriously an improving crop.

From an abstract of a late lecture of Prof. Voelcker, for which we are indebted to a communication to the Country Gentleman, we quote as follows: "In connection with other field experiments, one was undertaken to investigate the causes of the benefits of growing clover as a preparative crop for wheat. It is well known in England that if farmers can succeed in growing a good crop of clover they are almost certain of getting a good paying crop of wheat. All agricultural matters depend upon each other. If we can enable the farmer to produce good crops of clover, we shall place him in the very best position to obtain paying crops of grain. Hence it is concluded that the very best preparation, the very best manure, is a good crop of clover. Now, at first sight, nothing seems more contradictory than to say you can remove a very large quantity of both mineral and organic food from the soil and yet make it more productive, as in the case of clover. Nevertheless it is a fact that the larger the amount of mineral matter you may remove in a crop of clover, and the larger the amount of nitrogen that is carried off in the crop of clover hay, the richer the land becomes."

The explanation is that by growing clover a vast amount of mineral matter is brought within reach and rendered available to the roots of the grain crops that otherwise would remain in a locked-up condition. Clover, by means of its long roots, penetrates a large mass of soil. It gathers up, so to speak, the phosphoric acid and the potash disseminated throughout the soil, and when the land is ploughed and the roots left in the surface, they leave, in an available condition, the mineral substances which the wheat plant requires. And, while a large amount of such matter is removed in clover, still the amount rendered available and left for the succeeding crop of grain is very much larger than the quantity removed in the clover hay.

The accumulation of nitrogen after the growth of clover is also extremely large.—Even when the crop is small the amount left in the surface soil amounts to tons; and the better the clover crop the greater the accumulation of nitrogen. In experimenting to determine the amount, it was found that wheat was much the best where the clover was largest, and that it was due to the accumulation of nitrogen that the wheat grew so much more luxuriantly. Another experiment was made to ascertain whether there was more nitrogen left in the soil after the clover was cut twice than when it was mown once and allowed to go to seed. But in clover we have a remarkable exception to this rule, as it is found that after growing clover for seed a very much larger quantity of nitrogen remains in the surface soil than when the clover is mown twice. It was also ascertained that when you feed off clover by sheep, while it is still young and everything is returned to the soil, the land is not in so good condition as when clover hay is taken off. Those practically acquainted with the subject must have seen that wheat was not so good where clover was fed off quite young, and that the best crop of wheat is produced where clover went to seed.

Dr. Voelcker has frequently been struck with the remarkably luxuriant appearance of wheat sown where a heavy crop of clover had been removed from the land. At first it was doubted, but at last he was obliged to confess that it invariably follows when you get a good crop of clover that you get a good crop of wheat. An enormous amount of nitrogenous organic matter is left in the land after the removal of the clover crop, and this gradually decays and furnishes ammonia, which at first, during the colder months of the year, is retained by the well known absorbing properties which all good wheat soils possess. "In reality, the mowing of clover is equivalent, to a great extent, to manuring with Peruvian guano; there is a larger amount of nitrogen accumulated in the first six or twelve inches of soil than there is in the heaviest dose of guano that any person would think of using. The total quantity of nitrogen calculated for twelve inches of soil on an acre amounted, in the field mown twice for hay, to 5,249½ pounds, whereas the amount where the field was cut once, and then allowed to go to seed, was 8,126½ pounds, the latter having an excess of 3,592 pounds.—There were also more roots where the clover went to seed."

We should have been glad had Dr. Voelcker made the experiment where no hay was cut at all, but the whole first crop allowed to fall and remain upon the ground until the time of ploughing for wheat. In England and wherever else the crop of hay may be in demand, it would be thought very wasteful to leave the crop uncut, but in many parts of America where grain is the chief crop, and there is a great excess of provision for the small proportion of cattle, no better use, it is thought, can be made of the clover, than to turn on the cattle while it is in full bloom, and allow them to eat what they will and trample the rest. In this manner large masses of clover are pressed close to the surface, and besides giving to the soil its own matter, acts as the best mulch, husbands the ammonia from rain and dew, and becomes a harboring place for myriads of perishing insects. We can readily understand that practical men who have tried this method think it by far the best mode of treatment of the crop so far as improvement of the land is concerned.

By the time the clover is brought well to the ground by the treading of the stock, the second crop begins to grow, and in a few weeks makes such progress that by the time of ploughing for wheat there is a mixed mass of green and dry matter, which readily decomposes on being turned, and gives the richest manuring for a crop of wheat. This, well prepared, makes, beyond comparison the best condition, so far as the ground is concerned, for wheat, and should be now, when there seems to be special occasion for the best method of treating that important crop, the chief if not the only reliance of the wheat grower. We make exception, indeed, in favor of the Southern field pea, which is, perhaps, equal to clover in all the qualities of a first-rate fertilizer, and is especially suited to Southern latitudes and to such soils as clover often fails to flourish in.—*Weekly Sun.*

Colts and Horses.—Robert the Bonner has defeated Carl the Benson on the colt question. The latter says: "No European, at least, would call a thoroughbred a colt after his second year." Robert shows that the Europeans do, numerously; such of them as Tattersall, Blaine, Turner, Gamgee, etc. The *Turf, Field and Farm* explains the difference between a colt and a horse—that the animal "ceases to be a colt when his mouth is full, that is, when he has his full set of teeth; and this sign of maturity occurs when the animal is five years old. When an equine passes his fifth year he is a horse, and not a colt in the vocabulary of breeding." Of course the rule applies to mares *mutatis mutandis*, and herein Carl's error has its root, that the term "horse" denotes anything foaled by a mare, and is, accordingly, in ordinary language, applied to the animal when he has become fitted for the uses to which horseflesh is devoted. Still the technical terms colt and filly, should be strictly observed in all turf matters.—*Mobile Register.*

Winter Management of Stock.

An Essay read before the Concord Farmers' Club, by Mr. Elijah Wood.

It is now the opinion of most people, that no branch of farming compares in importance with the keeping and management of stock, especially in winter. The success of the farmer depends almost entirely upon it, in this latitude. Our farms have become exhausted of certain elements which must be restored by keeping stock, or by purchasing manure; and the latter is certainly out of the question, as experience has taught most of us. No good farmer will sell his hay for a succession of years, without buying its equivalent in some form as a fertilizer. Therefore, stock must be kept and managed so as to be a continual source of income. Many farmers depend solely upon their cows for support, selling very little from the farm but *their* products. The highest success depends on the care and attention they receive, and we all know that cows cannot give much milk without they are supplied liberally with good feed.

It is bad policy to keep too much stock for the amount of fodder on hand. One ton of hay given to one cow will produce more milk in a given time than if fed to two. The manure has more bulk and is better, because two animals have to be supported from it in the place of one; the labor is only half as much, and the capital is also reduced in the same ratio.

I have always found, while raising milk, that November was the hardest month in the year for that purpose, because it is "between hay and grass;" nights cold; days windy and chilly; grass frost-bitten; and corn-fodder dry, and generally too much exposure of the cattle. November should properly be called a winter month in the milk business. Cows should be fed extra well then, and to make them continue their flow of milk through the winter.

There are certain rules to be followed in order to succeed in any business,—so with successful stock feeding. Barns must be warm and well ventilated. It is not enough to close up tight just about the cows, exposing them to drafts of air when the leanto is opened for feeding, but the whole barn should be of one temperature, above freezing, with ventilators that can be regulated at pleasure. Cows must be well fed. They cannot do well on coarse kinds of fodder, meadow hay, &c., but must be given something fully as nutritious, as the best feed in summer. English hay is the basis. Corn fodder, straw, meadow hay, cut and mixed with the different varieties of grain, according to their concentration and value, roots, &c., prepared in some way equivalent to summer food.

In my successful days of milk-raising—days of which there is no reason to find fault,—I studied to find out the most profitable way of keeping milch cows with the material at hand,—which was often of rather poor qualities of fodder. I used to consider it unprofitble to cut good hay, or anything that the cattle would eat quickly without waste, but always found it advantageous to cut the second qualities—poorer hay and corn butts. Have gone so far as to weigh the entire feed for weeks. I found my cows would eat of long hay twenty-four pounds each, on an average, with four quarts of oil and cob meal, and that *eighteen* pounds of fine cut hay, mixed with the same amount of meal, and moistened with warm water, would satisfy them just as well, and insure full as much milk. I continued the cutting as long as I continued the business, and am a firm believer in it,—and steaming too,—provided the stock is large enough to keep a man employed all the time.

Regularity in feeding is of the greatest importance. Feeding only when you happen to be about the barn makes the cattle restive and never satisfied. I commence in the morning after milking, by giving the cut-feed mixed the night before, then pass them the hay or other fodder until they are full, (let it take a longer or shorter time) or about two hours, if the hay is good,—if poor a longer time; water, and let them remain quiet till noon, going through with the same change again. They most invariably drink well after eating, but if suffered to remain two hours will refuse water. Some farmers hardly even turn their cows out in winter but water in the barn. The watering *there* I approve, because they will drink more from pails if it is pure and of even temperature, and their vicious neighbors do not disturb them; but in the yard the inferior ones are driven and hooked about, never having any peace. Exercise they need, if only for ten minutes each day, to give them the use of their limbs. I was convinced of the importance of their being moved each or every other day, from trials at another place some ten years since, where there were no conveniences for watering in the barn, but the stock must be turned into the yard, stormy or not.

They came out in the spring looking much better; in better flesh: hair glossy and smooth; while at the home barn, where they were turned out sometimes once in three days, sometimes once a week, according to the variations in the weather, they did not hold their flesh as well; their exercise when out was too violent, they ran and capered, and tore their hair off with their horns, making them look rough and forbidding. Too close confinement in the stable creates an itching or disease of the skin very uncomfortable to the animal, which can be prevented in part by a little airing every day, and vermin do not trouble as badly. If ashes are sifted over stock when they are first confined in the barn in the fall, and thoroughly carded and exercised a little each day, no vermin will trouble of any consequence. Bedding should not be overlooked. Cut meadow hay or straw, or in their absence fine sand, answers a good purpose, and also keeps them from slipping when the floor is smooth, preventing accidents.

I have spoken more particularly of milk cows, but rules are just as applicable to dry and growing stock. Most of us are too neglectful of the last class, turning them off with the waste, and requiring most of the summer's run to grass to recover flesh in winter. I have been keeping from twenty to thirty-two working oxen for the past six winters and feeding upon corn fodder, meadow hay, millet, rowen, poor qualities of English hay, &c. They were such products as do not readily sell. I always looked after the stock myself, and they gained perceptibly, and some of them sold for beef in March. In the morning, at 5 o'clock, all the remains of the previous day's feeding, were cleanly swept from before them—mostly corn butts—and feeding commenced again with husks, three times, *a little at a time;* stalks twice, a bundle to a pair, each time, meadow hay, rowen, clover hay once each, in all some eight or nine times; watered at 8 o'clock. and then let them stand, or turned them out if no other work was pressing. At noon they were fed three times on hay, and watered again at 1 or 1½ o'clock. Flint says in his treaties, that an animal will drink four-thirtieths of its weight in water. My twenty oxen, not worked, out of the twenty-six drank, to-day, before half-past one o'clock,—three of them, seven pails each, or fourteen gallons, twelve pounds to the gallon, 168 pounds; nine, twelve gallons, 114 pounds; six, ten gallons, 120 pounds; and two, six gallons, 72 pounds; in all, 222 gallons—2,664 pounds.

How, or why is it that some farmers can carry their stock through the winter better on meadow hay than others will on English? Is it not the case? It is owing to the nursing, the regularity, the liberality, the judgment! Some farmers always have good cows, and others always poor. It is dangerous to recommend and sell to the last class, because they are always disappointed. You ought to tell them, when they buy, that you do not sell the keeping.

The Club need not be told that it requires very little judgment and skill to feed English hay alone, but much of both to make stock thrive on poor qualities of fodder. In the first case they may be fed in large quantities and long intervals,—in the other, a little at a time and often, requiring much more time and patience. But the true rule is, to feed *often and a little at a time*, of all kinds of fodder.—*New England Farmer.*

Odors Inhaled by Dairy Cows.

The readiness with which fœtid odors are conveyed to the milk of a cow through her breath, I have seen well exemplified this summer. About the first of June, I lost a calf suddenly by its drinking too much whey. The carcass was ordered to an out-of-the-way place, and nothing more was thought of it, In a few days, the milk in my vat was found to be tainted, and alternately tainted and pure with every change of the wind. The cans coming to my factory were critically examined for the infected milk, but to no purpose, Happening to cross my pasture when the wind was westerly, the scent of carrion was detected and traced to the calf I had lost. It had been dropped short of its intended destination, and left where the northwest wind swept the stench over the pasture, which was inhaled by the cows and conveyed to their milk. Though the quantity was not large enough to be discovered at the time of milking, yet it was enough so to infect the milk that by the time it was worked up, it was very apparent in the soft spongy feel and strong odor of the curd. Upon the discovery of the cause, the taint was at once obviated and nothing more of it appeared.

Last year there was a great deal of trouble with the cheese in a neighboring factory. The curds often worked badly and smelled badly

and resulted in imperfect cheese, which occasioned much loss to the patrons and vexation to the maker. If he could not make good cheese out of any milk that was brought to him, he of course was complained of as incompetent for his position; and he in turn complained of the milk, and especially of the milk of a certain large patron, who furnished the milk of between forty and fifty cows. The milk of this patron, it was urged, seldom came to the factory without having a very strong and unnatural smell to it when the cans were opened, and that it just about spoiled the curds in the vats where it was worked; but the season closed without fully settling where the blame belonged.

This year the trustees determined to retrieve the lost credit of this factory, and employed at a heavy salary, the best cheese maker they could obtain. But it was not long before the troubles of last year began to be repeated. The milk of the patron complained of last year, though not as bad as formerly, was still sadly "out of flavor," and gave the manufacturer much trouble. It sometimes was as good as any milk that came to the factory, but oftener than otherwise it had a disagreeable stench.

Satisfied where the trouble belonged, and failing to discover its origin by interrogating the patron, the manufacturer determined to go to the premises, and search for the cause, and the writer was invited to participate in the search. We met at the farm June 26th, looked over the herd for sick cows, saw them driven slowly to the yard and neatly and quietly milked. So far there was nothing that could be seriously complained of. The milk appeared to be good, and though it smelled a *little* strong, we should not have suspected it of being bad from its odor when first drawn from the udder, but it proved that its journey of two miles to the factory developed its bad smell. We also looked over the pasture for stagnant water, foul weeds, or coarse grass, that might sicken the cows or make them feverish, but found nothing of the kind. The water was pure and the feed good. But we did find in the middle of the pasture a *dead horse* that was slowly consuming with a very offensive odor. This appeared to us a sufficient cause for all the mischief. The cows were occasionally turned into another pasture, and, very likely, would some days keep out of the range of the carrion stench, and thus the occasional purity of the milk could be accounted for. Though the dairyman did not think it possible that the carrion could produce such results, we insisted on the burial of the horse, and all the trouble ceased therewith, and has not since reappeared. The cause of the bad milk is fully settled.

But some reader may ask, if it was the stench from the dead horse that tainted the milk, how happens it that the milk of this patron was as bad and even worse, last year than this? We found upon inquiry that last year there were *two dead* horses in the pasture, and that they lay there unburied all summer, and hence the milk was bad the season through. It has been estimated by several who are familiar with the circumstances, that these three horses have occasioned a loss to the patrons of the factory of over $1,000. This is a pretty large sum to be paid by one factory for tuition—but "experience keeps a dear school," &c.

With a view of saving others, a similar expense, these facts are offered, and it is hoped that dairymen will read and remember, for—from considerations of health as well as profit—it is high time such facts were understood, and that dairymen should be familiar with the general rule, that odors, are taken from bad air, as well as from bad food; that the scent of carrion or a foul stable is as readily and as certainly carried to the milk through the breath of a cow, as those of an onion or a leek when taken into her stomach.—*Ohio Far.*

Fattening Hogs.

BEST AGE FOR FATTENING.

Whatever may be said of other sections of our country, spring pigs are the best for New England. They should be littered about the first of March, taken from the mother the last week in April, when the early calves are sold, and the milk from the cows is beginning to be plenty. If the supply from the dairy is sufficient, they will need little or no meal until the milk begins to shrink in August, and then fattening should at once commence, and be continued till the last of November, or the first of December, when if the pigs are a thrifty herd and the farmer has done his best during the summer, a litter of six or eight ought to average at least three hundred pounds. Wintered hogs would weigh at the same time from fifty to one hundred pounds more, but the additional weight would be at the cost of constant care during the winter, and grain continually fed from December to May, both making the cost of the pork per pound from two to four cents higher than if made from spring pigs.

A recent experiment, carefully conducted, made the cost of a litter of four hogs killed at thirteen months old, when compared with a litter of pigs killed at nine months, as thirteen to ten.

BEST TIME FOR FATTENING.

The best time is in the months of September, October and November, and the worst in December, January and February. A certain amount of food is needful to keep the animal warm when the thermometer is at zero. All this is saved when it stands between thirty and sixty degrees. In addition to this, the absolute loss of food by freezing to the spout and trough, and the inevitable mixing with snow and slush, is never less (ordinarily) than five per cent., not to say anything about the trouble and cost of continually thawing frozen swill, and bringing it to the temperature that it will be the most acceptable to the uncomfortable and somi-torpid animal.

MODES OF FATTENING.

Not a few farmers feed corn in the ear, and some even raw potatoes, to their fattening swine. One-half would probably be an under estimate of the loss by this easiest but most slovenly and costly practice.

A large number mix dry meal with cold water or slops, and immediately feed it to their hogs. The loss in this case is not as much as in feeding the corn unground, but it cannot be less than from fifteen to twenty-five per cent.

Still others cook their meal with their potatoes, both thoroughly, completely mixing the one with the other, and then adding to the conglomerate water sufficient to make a thick mush, present it to the gratified and hearty eaters, thereby saving nearly all the fat producing value contained in the grain and the potatoes.

For several years we have adopted this plan. Everything fed to our hogs, while fattening, is cooked, but nothing is ground. To one bushel and a half of potatoes (mashed) we add three pecks of dry corn in the kernel, and then with a liberal supply of water in a kettle almost steam-tight, we cook for at least three hours. The kernels are then three or four times their original size and the potatoes are mush, and when thoroughly mixed the dish is as acceptable as can be presented to a lot of fattening hogs. And as every particle of the food is (or can be) reduced to a paste by the slightest mastication, much more by the action of the stomach, there can be little if any loss.

The advantages are, that you save the time of taking your grain to the mill, the toll, and having your grain always at hand in a proper condition to use; there is a steadiness about the food that is one of the main elements of success in feeding fattening animals.

An addition of a few quarts of rye and an occasional peck of oats, making a little variety, is always a judicious plan; either of which are as easily cooked as heavier and larger kernels of corn.

CLEANLINESS AND COMFORT.

To fatten well, hogs must have a clean pen and a comfortable nest. An addition of muck or mould or dry leaves should be made to the yard at least twice in each week, and the bed should have special attention so often as every other night. Wading round up to their bodies in mud is very unprofitable business for an animal upon which we are anxious to place as cheaply as possible the largest amount of fat; while nights, worn out in the restlessness that wet straw or wet earth always makes inevitable, are not especially conducive to the same desirable end.—*Hearth and Home.*

ACTION OF CARBOLIC ACID ON REPTILES.—We have been favored with extracts from an account of some very valuable experiments made by J. Fayrer, F.R.S.E., C.S.I., &c., on the value of carbolic acid in preventing the entry of serpents into dwellings, from which we find that a few drops of the acid are sufficient to quickly kill full-grown cobras and other poisonous snakes. Dr. Fayrer is continuing his experiments on the merits of carbolic acid as a therapeutic agent in snake-bite, and, in the meantime, he suggests its use as a preventive against the entry of snakes into houses, &c. Dr. Calvert informs us that it is probable that the acid will save life by applying it, in a caustic state, to the wound caused by the bite of a serpent, and more satisfactory results will be obtained by following the method first put into practice by Dr. Tessier in the Mauritius, for the cure of a virulent intermittent fever. In this case, by injecting under the skin a solution of three-quarters of a grain of carbolic acid dissolved in twenty minims of water, the patients were rapidly cured, and the spread of the pestilence arrested.—*London Chem. News.*

A Taint Among the Cream Pots.

Little things are often very mischievous in their consequences. It is the small leaks in farming that generally eat away the profits. A gate carelessly left open, or a rail thrown from a fence and not replaced, has often resulted in the destruction of valuable crops. The majority of farmers who look back over their losses during the year, will find that these, not unfrequently, spring from some neglect, or non-observance of little things, which if attended to in time could have been repaired or rectified in an hour or a day, and the damage avoided. "A stitch in time saves nine," is the old adage which most people during their lives have occasion to be convinced, is a truism.

The "Country Parson," in an elaborate essay, very conclusively proves that most of the ills and worry of life come from little things—petty annoyances, very insignificant, when viewed singly and alone, but while in their constant and unremitting droppings, cause more unhappiness, and do more damage to the body and mind, than the great misfortunes or mishaps with which life is beset. Little things have much to do in dairy management. It is a little thing in butter-making that often spoils a large quantity of butter. Due attention may have been paid to pasturage, to cows, to milking, to setting the milk, and churning the cream, and yet, somehow, the butter turns out to be ill-flavored and inferior for the table.

Not long since a butter-dealer called upon us to inspect with him some samples of butter of inferior flavor. The color and texture of the samples were beautiful. Neither he nor the persons at the farm where the butter was made, were able to account for this peculiar inferiority in an article otherwise so well made. And at special request we were invited with the dealer to look over the premises and to point out the difficulty. The pastures and water were excellent. No defect was observed in the cows in the milking, or in the general management of the milk. The dairy in all respects appeared to be managed with a due regard to neatness, and it was only on investigating the cream pots and the cream-closets that anything pointing to the difficulty was discovered. The air here was certainly very impure, and on further examination it was found that a drain leading under this portion of the dairy house had become defective or partially obstructed, and the emanations rising had communicated its taint in the cream pots. That the suspected cause was the true one, was proved by taking the cream skimmed afterward from the milk into another place and churning each separately. That cleanliness and a pure atmosphere for milk and cream are essential to success in butter making, seems to be one of the most difficult things for people to understand. We have seen butter spoiled by standing the cream in wooden vessels—vessels that had absorbed a putrid taint from decomposed cream, and which no ordinary cleansing would remove; nor could dairy-maids sometimes be made to believe that so apparently slight a cause would produce the difficulty, until a change from wood to stone cream pots, changed the whole character of their butter product. Some dairymen are in the habit of standing their cream pots in the kitchen pantry to take the odor of boiled cabbage, fried onions, and the steam of culinary operations on the kitchen stove; and it is in these things, these *little things*, that a taint goes to the cream pots, and the good woman wonders "what the deuce is the matter" with the butter.

The butter makers of Pennsylvania, who manufacture the celebrated Philadelphia butter, are exceedingly careful that no taints be allowed to come in contact with the cream or milk in the spring house. You cannot enter these sacred precincts with a lighted cigar—your shoes must be cleansed of all impurities, and you are expected to observe all the proprieties that you would on entering a costly furnished parlor. It is by attention to the *smallest details* that they have been enabled to accomplish a grand result, and put upon the table a luxury.

From a three weeks' tour through several of the Western States the present fall, the conclusion forces itself upon the writer, or rather upon his organs of taste, that there is a wide defect somewhere in Western butter dairies, and a taint among the cream pots. That good, sweet butter *can* be made in Illinois is quite evident, for we have eaten of it, and seen the cows, and pastures, and dairies from whence it came; but much of your butter at hotels is execrable stuff, whether it be freshly made, or old enough to be rancid. In many sections of New York, the butter makers "have nothing to brag off"—and it is barely possible "these creatures" may ship their grease West, to supply the hotels in your country villages; but if that be the case, they cannot expect Eastern people, who travel West, to recommend their goods.

If this be not the case, and there is really a taint among the Western cream pots, then the butter makers of the West have something to learn, and the Western Rural cannot talk too plainly on the subject, until it brings about a reformation.—*X. A. Willard, in Western Rural.*

Breeding Mares.

No mistake has been more common among farmers, and none attended with more pernicious consequences, than that of bringing colts from animals unfitted to bear them.—With all the keenness of observation, and the experience which many horse breeders possess—and they are usually among our most shrewd citizens—it is surprising that they have not yet discovered the great error of breeding from imperfect dams.

Every person may see, if he will, that points of physical beauty or defect are constantly transmitted to offspring, both from sire and dam. It is a law of nature that like begets like. If the slightest attention were paid to this rule, it would seem that no one would employ a mare to perpetuate the race which was known to be defective in any of the points which go to make up a good animal.

The same rule holds good, too, with regard to disposition, temper, or character. These are all important traits; traits so valuable that comfort, and even life itself, may depend upon them. And yet, because a mare has some one or two rare qualities, she is kept for a breeder, though she may possess several others, any one of which ought to condemn her for that use.

If two or three general rules were observed by all breeders, great changes might be wrought in a few years. The first of these is, *never to breed from an old animal*, whose body has been injured and its vitality weakened by injudicious treatment or by too severe labor. The results which follow these are obvious to every observer, both in man and beast. They are all impressed upon the living organism, and can no more be separated from it than breath can from the body and life still be preserved. They are *there*, whatever they may be, and will be imparted to the offspring, just as sure as "like begets like."

It is possible that cases may exist where it is safe to breed from an *old* mare. Two of the finest horses that reins were ever drawn over were from a mare nearly *thirty* years of age, but she was perfect in limb and spirits; had always been owned by the same person, and fed with as much regularity as the owner's meals were served; she was never raced at a "military muster," or overloaded in any way, and at *thirty-three* years of age, she and her mate, of about the same age, were not only sound in wind and limb, but were a pair to be proud of when one held the reins over them. A pair of her colts, born after she was *twenty-five*, sold, under our eye, for twice as many hundred dollars as other fine horses about them brought! A moderate old age should not, therefore, absolutely exclude the mare from breeding, if she is right in other particulars.

The common practice for many years past, and one which has become woven, as it were, into the habits of the people, so that it seems as natural as the breath of life, is, to keep the old mare for breeding, when she is unfitted for service on the road or on the farm! This is where the evil commences. She is a favorite animal, was handsome, spirited, and with a power of endurance almost beyond belief. But now she is seventeen years of age, has a spavin, a slight touch of the heaves, and one or two other trifling matters which are a little inconvenient for a working animal, but she will make a good breeder, and about pay her keeping besides! This is the conclusion arrived at, and thousands of such cases exist among us to-day.

So the old mare, crippled by too early labor and disabled by disease, is to become the progenitor of a race which is to occupy a certain locality, perhaps, for a hundred years! It is scarcely possible that her young will not be injured before they see the light, and the strong probability is that each one of them will bear the marks of her imperfections.—Some with ringbone, perhaps, or asthma, or spavin, or some lurking disease that had not developed itself in the overworked and disordered mother. We have seen a yearling colt with a ringbone upon every foot. Well formed otherwise, apparently healthy, eating and drinking well, but suffering and utterly worthless.

The subject has several other points of interest, some of which we will speak of in a future article.—*New England Farmer.*

Horticultural.

The Fruit Garden.

JANUARY.

Make all needful preparation for planting out fruit trees, gooseberries, currants, raspberries, &c., as it is important to have them in the ground at the earliest time practicable. Hardy trees of all kinds may be pruned when convenient. Manure may be applied around such as need it. Trim out well, the heads of gooseberry and currant bushes, that the fruit may have abundant light and air.

ORCHARD.

The same directions as for the fruit garden are applicable to pruning, manuring and preparation for planting. There is ample opportunity now to repair any omission in this respect in the fall, and the best preparation of ground should be made, manures applied, &c. Newly planted trees should have litter thrown about their roots, but not enough to give harbor to mice; clean the trees of moss by scraping and washing with soft soap or some other suitable preparation.

ORNAMENTAL TREES.

Fill up all vacancies, and make such additional plantings as may be deemed desirable. Remember that it takes many years for a tree to grow, and that more or less old ones will be dying out.

VINEYARD.

Get stakes and poles for use in spring. Get necessary manures on the ground, and make all needful preparations for planting. There need be no such expensive preparation in the way of digging, trenching and manuring, as is sometimes recommended. Good loam that will produce seven or eight barrels of corn to the acre, will make a good vineyard if well ploughed and moderately manured from year to year.

House-Plants.

How to make plants grow in the house, is a much more important question than how to make them grow in the greenhouse. Few persons have conservatories. Almost every person has a window at which the spring and summer of plant life may be fostered and maintained during the long winter months.

Formerly, almost every house had its plants. The children and the flowers were the chief ornaments of the old homestead. During the last generation, or since the introduction of furnaces and gas, the cultivation of plants in our houses has steadily declined. I propose now to show that this great deprivation and loss to our modern houses is unnecessary, and that plants may flourish as well under the dispensation of gas and the furnace as in the days of the old wood-fire and mould candles.

It may be true that plants will not grow in an artificially desiccated air. The skin and the delicate membranes of the throat and lungs parch in the dry furnace-heat just like the leaves of the plants. The freshest complexion grows wizened by a winter of this sirocco. What, then, shall be done in our furnace-heated houses? Simply introduce evaporators, which shall furnish to the air at least one-half as much moisture as the air naturally contains *at the same temperature* in spring or summer. The shrinking of the wood-work of houses, or warping of furniture, are indications of an unnaturally dry heat, which is fatal to plant, and injurious to animal life.

It is true, also, that plants will not thrive in close rooms charged with the sulphurous acid escaping from the combustion of anthracite, or a product of combustion of impure illuminating gas; and, in the same atmosphere, the throat and lungs of human beings will suffer more or less severely. What is the remedy? Open a ventilator into the chimney, near the top of every room, if you can do no better, and keep it open, at least during the evening, while the gas is burning.

I am prepared to say that furnace-heat and gas-light are no obstacles to the cultivation of plants, observing only the precautions which are equally essential to human health. I think the rule should be broadly stated, that any room in which plants refuse to grow is unfit for human life.

In this connection, it is proper to enter a protest against the barbarous habit of excluding the sunshine from inhabited rooms, especially in winter. Its effect is almost as depressing on children and delicately-organized women as upon plants.

There is one other obstacle to the growth of plants in the modern house; which is the plague of insects. Some varieties, especially the microscopic red spider, are uncontrollable in a dry atmosphere, but retire at once before proper evaporation. For the rest, improved resources of which I may speak at another time, make it tolerably easy now to keep house-plants free from parasites.

To illustrate theory by fact: I heat a moderate sized house, containing about twenty thousand cubic feet, with a furnace. I find it necessary to expose seven square feet of evaporating surface in the air-chamber of the furnace to produce a proper degree of atmospheric moisture. Half this surface would answer with better exposure. About a pint of water is evaporated in twenty-four hours for each seven thousand cubic feet in the house, in raising the temperature from 40° to 70°, two pints in raising it from 30° to 70°, three pints in raising it from 20° to 70°, four pints in raising it from 10° to 70°, and about five pints in raising it from zero to 70°. Thus, in the extremest cold weather, it requires nearly six pails of water in twenty-four hours to keep the atmosphere of the house soft and agreeable, though not appreciably moist; that is, not nearly as moist as the ordinary summer air at 70°.

At twelve windows, north, east, south and west, of the house thus heated, I have about seventy plants, mostly of the common kinds, in very fine condition. During several years, I have never known them to be injured by furnace-heat, and never by the gas, freely consumed, except in the single instance of an ivy growing near the ceiling of a room during an accidental leakage of gas.

I find that ivies thrive peculiarly under the conditions described, growing well in positions farthest from the light; as, for instance, on the hearth, forming a magnificent fire-board. Six or eight varieties of variegated-leaved ivy thrive equally well with the common. I find that roses which have blossomed during the summer in the ground, been potted after hard frost, stripped ruthlessly of every leaf, and trimmed in almost to bare poles, are covered with buds within a month at my window, and blossom all winter, great authorities to the contrary notwithstanding. This winter, a Madame Bosanquet has led all the rest, showing buds in three weeks, closely followed, however, by the Agrippina, Souvenir de Desire, Safrano, Hermosa, and Sanguinea.

The Chinese-primrose and coral-drop begonda are never out of blossom with me in winter. A heliotrope, occupying a whole window, gives hundreds of its clusters, beginning in December. The orange, lemon, myrtle and diosma grow with the greatest ease; and the Daphne odora and laurustinus blossom in their season. Among other plants which I find it good to have in a house, I will mention the varieties of winter and spring blooming cactus, geranium, oleander, abutilon, calla, Tradescantia zebrina, (large and small leaved,) hoya, maurandia, tropæolum, saxifrage, Coliseum vine, Madeira vine, and the usual bulbs.—*Cor. Tilton's Journal of Hort.*

A Few Facts About Mould.

The most subtle enemy the housekeeper has to guard against is mould, for it matters little how much care has been taken to prevent its presence, it is sure, now and then, to make its appearance.

If we were to take a bit off from some canned peaches, and place it under the microscope, we would see a forest of beautiful white vines, covered with green heads; this constitutes the ordinary "mould," though every substance has its own kinds, yet the general appearance is the same.

But the question is, how did it get on the peaches? for they were put in the can at a boiling heat, which would kill any ordinary vegetation, and also kept from the air, but in time we have a crop of mould.

In the first place, one of the heads is only the one seven thousandth of an inch in diameter, and it has been computed that one individual of the puff ball family, will produce *ten millions* of sporules, so it is utterly impossible to think of the number of sporules that a small amount of mould would produce.—These spores are supposed to fill the air in every place, and when they fall in anything that is favorable to their growth, produce heads, which elongate, then divide in two, and thus in a short time increase to a most fabulous number.

If we take the mould and look at it under a high magnifying power, the heads would look about as large as a fine needle; by rubbing the heads between two pieces of glass, they will break open and produce the sporules, which are so fine as to look like dust when magnified 1000 times. They may in like manner be broke up into sporules and float in the air ready to alight on any convenient article, from an old boot to the finest preserves.

Carbolic acid, even in the smallest quantity, will prevent the growth of this pest, in anything with which it is mixed, but as it tastes like an old chimney, it would not do very well in preserves.—*Northern Farmer.*

The American Farmer.

Baltimore, January 1, 1870.

TERMS OF THE AMERICAN FARMER.

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FRANK LEWIS,

No. 4 SOUTH ST., Baltimore, Md.

Special Notice.

Attention is asked to the change in the form of the "American Farmer." The undersigned having purchased of Messrs. Worthington & Lewis their entire interest in the paper, presents it to its readers, changed in form from octavo to quarto, with its subscription and advertising rates reduced twenty-five per cent. By making this change he is enabled to publish it not only in a more desirable form than heretofore, but also at a reduced cost, *of which subscribers and advertisers have the full benefit.*

The general plan and quality of the paper, however, will remain unchanged, except that such improvements will be made, from time to time, as the requirements of its readers and the progressive spirit of the age may demand; the object being to give subscribers such wholesome advice as may be of *practical* value to them in their honest and noble work of tilling the soil. To this end, the services of Prof. N. B. Worthington, as agricultural editor, have been retained. Having at the head of its chief department that efficient gentleman, a practical agriculturist and closely identified with our State Agricultural College, the "Old American Farmer" will continue the good work begun by Mr. Skinner in 1819, and will need only the generous support of its patrons to insure even greater success than it has achieved in the past. Numbering among its editors Mr. John S. Skinner, Dr. Gideon B. Smith and Mr. Edward P. Roberts, and among its contributors Messrs. Horace Capron, Willoughby Newton, Jos. E. Muse, Edmund Ruffin, W. W. Bowie (Patuxent Planter), Dr. David Stewart, S. Bassett French, L. A. Hansen, Dr. George H. Dadd and other bright stars in the galaxy of agricultural literature, it has held, during the half century of its existence, an exalted place in the estimation of its readers, and the publisher pledges himself to do all in his power to make this "pioneer" journal merit the good opinion of the entire agricultural community.

A hearty co-operation and support are earnestly solicited.

FRANK LEWIS, *Publisher.*

BALTIMORE, Jan. 1, 1870.

Notice.

The American Farmer, its readers will see, has undergone a material change, of which previous notice was not given, because at the date of its last issue, it was not in the least anticipated. It has passed into the hands of Mr. Frank Lewis, who has for eighteen months been in charge of its office business, and becomes now sole proprietor. He has, at once, changed its form, lowered the prices of subscription and advertisement, laid aside the familiar green cover, and, generally, has taken off his coat for hard work. From time to time, he will, no doubt, make such other changes as his judgment and experience may dictate, and it may be understood, we think, that *The Farmer* means to keep no longer the quiet way it has followed for years past, but, taking something of the spirit of the times, will go into the dust and turmoil of competition and conquer such success as its merits and its position should command. In other words, Mr. Lewis, an experienced and energetic business-man, takes hold of the affairs of the Farmer as a business enterprise, and will bring to bear upon them such efforts and agencies as will, no doubt, merit and win a prosperous future.

The writer of these lines has wished for some such change, and gladly puts off the care and responsibility which attach, necessarily, in greater or less degree, to business engagements. Other duties demand too much of his time, and are of too much interest to allow a divided attention. It is now just fifteen years since he became joint owner and editor, and a few years later he became sole proprietor of The Farmer. Shortly after his connection with it, it assumed its decent mantle of green and that becoming outside show which seemed a fit dress for what he aimed to make it, an embodiment of sound and wholesome teaching. What its general character has been within the period named, and what good, or perchance evil, it may have done, he professes to have been, mainly, his work.

Within a year of assuming these editorial duties the first effective step was taken towards the founding of the State Agricultural College. As a member of the Committee from the old State Agricultural Society to memorialise the Legislature, as one of the incorporators named in the charter, one of the Commissioners appointed to take stock and collect funds, a member of the first elected Board of Trustees, and now for eight years one of its Corps of Instructors, he has followed that Institution through every step of a long and doubtful struggle for life. It has passed now safely to a position of assured success, but needs steady, unceasing, faithful work, to solve completely the problem which it has in hand and to work out fully the ends it aims at. The share of this that falls to the writer's hands demands his first care and most earnest endeavour.

It will be seen, however, by announcement elsewhere, that we are not taking leave of the readers of the Farmer, with whom we have had so long and pleasant intercourse. It will be a labour of love to give such leisure hours as we may command to the agreeable and familiar work of providing suitable entertainment for our Farmer friends, in its chief department. To Mr. Lewis will be left all else, and it will be his part to secure such other help as may be needed and to shape its future course and give it its future character.

Agricultural Ghosts.

There are agricultural ghosts that will not stay in their graves, where they have been buried, but rise to trouble us when we would be more profitably occupied. Old questions that have been discussed through whole volumes, and got their *quietus* through the tiring of the disputants if nothing else, rise again in the lively columns of some of our best journals and fight their battles over again. Deep Ploughing, Does Wheat turn to Chess? Is Salt Good for Cattle? Should Shade Trees be allowed in Pastures? are only a few of the number.

That salt is good for cattle, the cattle themselves have settled long ago, with perfect indifference to scientific theories, and are sure to take the salt whenever it is offered to them. Practical men take that as a strong argument in favour of its use, and wisely supply their stock with such moderate quantity of this condiment as they seem to require.

Should Shade Trees be allowed in Pastures, holds about the same position to the arguments of the knowing. It may be proved abundantly that cattle profit more when they have no shade to resort to, yet there will be people left of good taste and good feeling, who will spare an old oak tree because they love the tree, or preserve the shade because they love the cattle.

The Farmers' Club of the New York Institute, a number of respectable gentlemen, who *will* have agricultural talks every week, to be reported in the New York Tribune and other papers, and *must* have something to talk about, are sure to start one of these ghosts now and then. Very lately it was deep-ploughing, when lamentations loud were uttered at the damage done down South by the careless utterances of certain members of the Club, who had advocated shallow ploughing. Not long ago the ghost of the question of feeding stock on cut or uncut provender was raised. Those who introduced the subject and made the longest speeches, seem to have satisfied themselves that straw cutters are very useless implements, and that the reduction of the provender can quite as well be done by animal grinders, worked by the animal itself that consumes the provender. On large farms, devoted to grain-growing and not near to market, and where long provender, therefore, superabounds, there may be a question of economy raised; but about the city of New York or any market for such food, how these gentlemen could have got the question started, much less have it elaborately advocated, we do not well understand. Is there any agricultural problem, that will ever be definitely settled?

Mr. Quinn, a member of the Club, asked indeed, with some indignation, "what would an English farmer think of us, if he were to step into this Club and find us gravely discussing the propriety of cutting food for animals, and Gamaliel and all the doctors of the law, thundering their anathemas against hay-cutters. He would think that we had as yet the farmers' alphabet to learn."

And now again we find the old, old question, Does Wheat turn to Chess? occupying the very serious consideration of some of our friends down South, to whom irresistible facts have been presented such as never were shown before, and this time there can be no mistake about it; wheat has certainly turned to chess. But if it has, ninety-nine in a hundred won't believe it, and where is the use of proving it? Let the ghosts rest.

The Coal Fields of Alleghany.

The *Cumberland Civilian* in a late number, makes an estimate of the contents of some of the coal veins of our mountain region, which is calculated to astonish persons who have not given much attention to the matter of our mineral resources. In what is known as the Big Vein it is estimated that there are 200,000,000 of tons yet untouched, while in twenty-eight years from 1842 to 1869, there have been about 15,000,000, mined and marketed. What are called the four and six feet veins have not been more than merely opened, and contain together more than the big vein. It is clear the civilian thinks that the fields will yield two million tons per annum for a hundred years. The quantity yielded the past year was 1,900,000 tons.

As a means of developing this trade it says: "The Baltimore and Ohio Rail Road has now in operation a splendid double track, extending from the coal fields to Baltimore, there connecting with tide-water. Costly handsome and substantial bridges have been constructed, curves have been converted into straight lines, the distance has been shortened, new tunnels made for this purpose, a large provision of locomotives and cars made for this special trade, an addition of two hundred cars having been made during the present year, and scarcely anything left undone which might provide for the speedy transportation of this valuable article."

When we read such a statement, it amuses us to remember the charge made in the inception of this rail-road carriage of coal, that it was done necessarily, at a loss, and only undertaken when it was to make it appear to the Legislature that there was no occasion to complete the canal to Cumberland. The canal is completed and doing its share of the work, but the 400,000,000 tons will keep canal and rail-road busy.

"THE FARMER PAYS FOR ALL."—We are in receipt of a beautiful engraving representing the Minister, Physician, Lawyer, Soldier, Legislator, Merchant and Rail Road Manager—plying their vocations "for all," whilst in the centre stands the "Noblest Roman of them all"—the *Farmer*—who "Pays for All."

This well designed and truth-telling picture is offered as a premium by the "Prairie Farmer," and reflects much credit upon that enterprising Journal.

The American Sunday School Worker is a new candidate for public favor. It is an educational work for parents and teachers "designed for all sections and denominations alike." Published by J. W. McIntyre, St. Louis, Mo. Terms $1.50 a year, in advance.

Book Table.

We have from Messrs. Henry Taylor & Co. a copy of *Luck and Pluck*, by Horatio Alger, Jr. This is the first of the "Luck and Pluck" series in book form, as it appeared as a serial story in Ballou's Magazine for 1869. Price $1.50.

Also, three of Dick & Fitzgerald's neat and instructive little volumes—*How to Amuse an Evening Party—How to Cook Potatoes, Apples, Eggs and Fish in Four Hundred Different Ways*—and *Howard's Book of* 1400 *Conundrums*. Price 30 cents each, with paper covers, or 50 cents bound in boards.

Also, *Hope Darrow*—a little girl's story—one of the Breakwater Series—by Virginia F. Townsend. All the above are for sale by Messrs. Henry Taylor & Co., Baltimore.

The New Eclectic Magazine, for 1870.—This Magazine formed by the consolidation of *The Richmond Eclectic*, formerly edited by Dr. Hoge and Dr. Brown, of Richmond, and *The Land We Love*, formerly edited by General D. H. Hill, of Charlotte, N. C., is now the leading Monthly of the South. It is devoted to the publication of selected articles from the best American and Foreign periodicals, and original papers on General Literature, Science, Art, and the Educational and Material development of the Southern States.

It aims to combine in one, the most attractive features of the best Magazines of the day.

The Central Presbyterian closes an able article headed "A Plea for the New Eclectic," as follows:

Have we bartered away our manhood's birthright of free speech for a mess of Puritan pottage? If not, let us at least try and hold by our one representative monthly—*The New Eclectic;* for it does us infinite credit. To take it at its lowest point, its external attractiveness is fully equal to that of any of the magazines we have named; its selections are judicious and tasteful—its tone one of high culture. It needs nothing but a subscription list swelled to such proportions as will warrant its proprietors in carrying out their ambitious views for its future improvement and development.

Price $4 per annum. Published by Turnbull & Murdock, Baltimore, Md.

From Hon. Horace Capron, Commissioner of Agriculture, Reports of the Department for 1868 and 1869. In the latter we note the following very truthful remarks, which emanating "ex cathedra," we commend to the perusal of all intelligent farmers.

"MENTAL CULTURE.—The American farmer is cultivating not soil alone, but brains. The most potent agricultural educator is the agricultural press. It wields a power a tithe of which it did not possess twenty years ago. Its improvement within that period has been wonderful, and its progress was never so apparent as at the present time. The most practical, earnest and scientific workers in agriculture are the editors and writers of our rural literature. The mass of farmers are advancing in intelligence, and no longer stigmatize as 'book farming' the written experience of the most scientific and the most successful of their own class."

Messrs. Orange Judd & Co., New York, have favored us with the *American Agricultural Annual* and the *American Horticultural Annual* for 1870, both "brimful" of very instructive matter. Price of each 50 cents in paper or 75 cents in cloth.

Demorest's Illustrated Monthly for January, comes to us replete, as usual, with what is interesting to the ladies. To every subscriber for 1870, at $3, is offered a fine engraving—"The Fourth of July."

Southern Review for January—a standard work; it has no superior. Published by Henry Taylor & Co., Baltimore.

Packard's Guide to the Study of Insects.—Published by the Naturalist's Book Agency, Salem, Mass.

From T. S. Arthur & Sons, Philadelphia, *Arthur's Home Magazine, Once A Month*, and *Children's Hour*. The January number of each presents unusual attractions.

The Little Corporal is always a welcome visitor to our young friends. The first number of the new year appears in a new "uniform." Alfred L. Sewell & Co., publishers, Chicago, Ill.

The Nativity.

When Jordan hushed his waters still,
And silence slept on Zion's hill;
When Bethlehem's shepherds through the night
Watched o'er their flocks by starry light;

Hark! from the midnight hills around,
A voice of more than mortal sound,
In distant hallelujahs stole,
Wild murm'ring o'er the raptured soul.

Then swift to every startled eye,
New streams of glory light the sky;
Heaven burst her azure gates to pour
Her spirits to the midnight hour.

On wheels of light, on wings of flame,
The glorious hosts of Zion came;
High heaven with songs of triumph rung,
While thus they struck their harps and sung.

O Zion! lift thy raptured eye,
The long expected hour is nigh;
The joys of nature rise again,
The Prince of Salem comes to reign.

See, Mercy from her golden urn
Pours a rich stream to them that mourn;
Behold, she binds, with tender care,
The bleeding bosom of despair.

He comes, to cheer the trembling heart,
Bids Satan and his host depart;
Again the day-star gilds the gloom,
Again the bowers of Eden bloom!

O Zion! lift thy raptured eye,
The long-expected hour is nigh;
The joys of nature rise again,
The Prince of Salem comes to reign.—*Campbell.*

DON'T WHIP A FRIGHTENED HORSE.—Never whip your horse for becoming freightened at any object by the road side; for if he sees a stump, a log, or a heap of tan bark in the road, and while he is eyeing it carefully, and about to pass it, you strike him with the whip, it is the log, or the stump, or the tan bark that is hurting him, in his way of reasoning, and the next time he will act more frightened. Give him time to examine and smell of all these object, and use the war bridle to assist you in bringing him carefully to these objects of fear. Bring all objects if possible, to his nose, and let him smell of them, and then you can commence to gentle him with them.—*Ex.*

Sunday Reading.

God's Gift of Corn; A Sermon for Harvest-Tide.

Concluded from No. 6, Vol iv:

You remember how our blessed Lord likens Himself to a grain of wheat falling into the ground and dying, and so bringing forth much fruit: and how also He expresses to us that He is the nourishment of our souls, the staff of their life, by calling Himself the Bread of Life. Well, when we know that corn is God's special gift to men, their one essential, universal, and assured food, we see with what beautiful exactness it serves as a figure of the great truth, and with what good reason our Lord used it as a type of Himself.

It was not man's skill that produced the perfect life-sustaining grain: no more, rather far less, could he have fashioned a Saviour and Life-giver for his soul. God had to give him the food needful for him, the staff of his life, straight from His own Almighty hand: even so from heaven itself, from the very bosom of the Father, had to come the life and light of men.

So again, when we reflect that God gave the corn for the use of all men, that he gave it them to rejoice in and be thankful for, that he gave it them in such wise that they must use it, not neglect it, or think to do without it, at the risk of perishing, we see how he would press home to us our utter need of His still greater gift, and how unable we are to have any life in us apart from His dear Son, and without feeding constantly upon that living Bread which came down from heaven. Oh surely, by likening Himself to the corn which year by year takes up so much of men's thought and toil, and to the bread which causes them so much care, He wished to make us crave for and seek *Himself*—seek Him diligently and unceasingly, lest our souls should starve and die, but to seek Him withal in the full assurance of faith and hope, as knowing that his mercies never fail. Surely when He likened Himself to bread, which is His own special gift to man, but which yet needs man's constant labour and watchfulness along with His own, He willed to teach us that we have all to be fellow-workers with Him in the work of our salvation, fellow-workers by seeking and employing, by taking and working with the precious gift of Himself, offered to us in His different means of grace. Surely when he likened Himself to corn, the one universal want and blessing, He would teach us that the gift of Himself, which he gives, is the same for all, alike needful, alike life-giving: and to be taken as He gives it, just like the corn, not to be improved upon, not changed "by art or man's device," but already perfected and meet for its work.

Yes, and if we may add one more thought, it shall be this: that as the corn has always seemed to men a sign or picture of rest, and peace, and joy, so it teaches us that to be living members of Christ, that holy grain of wheat which fell into the ground and died that he might bring forth the much fruit of redeemed men dwelling in Him, to live upon Him and abide in Him, is the sure way to make our own the rest and peace and joy which are true because eternal.

So surely as where we see the corn-fields we know that men have found a fixed dwelling-place and home; so surely as where "the valleys are covered over with corn," they "laugh and sing," and present to us the picture of peace and gladness; even so surely, when men dwell in Christ, they have a fixed and lasting home; so surely when men seek His presence, and feed themselves upon his body, they will have peace and comfort, which may indeed be chequered by clouds here on earth, but can never be taken away nor lost. And David's words, so true of the teeming earth, suit well the Christian soul as it ponders upon or uses the Sacramental system of God's Church: "Thou crownest the year with Thy goodness; Thy paths drop fatness; they drop upon the pastures of the wilderness; and the little hills rejoice on every side. The pastures are clothed with flocks; the valleys also are covered over with corn; they shout for joy; they also sing."—*W. F. E., in "Penny Post."*

The Fireside.

Halcyon Days.

This name, so familiar in our times, was given by the ancients to the seven days preceding and the seven days following the winter solstice, (21–22 December,) in memory of Halcyone, the daughter of Eolus, guardian of the winds, and the wife of Ceyx, son of Hesperus, the morning star. On hearing of the shipwreck and loss of her husband, whom she loved devotedly, she threw herself into the sea, and the pitying gods changed them both into birds called halcyones or king fishes. Full fourteen days, near the winter solstice, in the "clime of the East," Halcyone broods over her nest, which floats unharmed upon the waters, and the way was then supposed to be safe to seamen, for Eolus keeps the winds from disturbing the deep.

The poets have drawn choice imagery from the ancient myth. Among them, Dryden alludes to it thus:

"Amidst our arms as quiet you shall be,
As halcyons brooding on a wintry sea."

So Milton, in his beautiful Hymn to the Nativity—

"But peaceful was the night
Wherein the Prince of Light
His reign upon the earth began;
The winds, with wonder whist,
Smoothly the waters kist,
Whispering new joys to the mild ocean,
Which now hath quite forgot to rave,
While birds of calm sit brooding on the charmed wave."

And Keats, in his Endymion, says—

"O magic sleep! O comfortable bird,
That broodest o'er the troubled sea of the mind,
Till it is hushed and smooth"

The poetic name given to these wintry days has passed into common use, and seasons of peculiar tranquility and happiness are called "halcyon days."

[Delivered at the meeting of the Press Club at Delmonico's, Nov. 27th., 1869.]

Toast—The Fashions.

THEIR RELATIONS AND THEIR ANTAGONISMS TO THE PRESS.

BY W. JENNINGS DEMOREST.

Mr. President, Ladies and Gentlemen—The very short notice given me must be my apology for the kind of *jumbles, hash* and *pie* I shall be able to bring to this feast to-night.

Printers are proverbial for their ability to *espy* good things to eat; but no kind of food makes them so *crusty* as *pie*—especially if when the *pie is opened* they find that some little "devil" had "put his foot in it."

The subject of Fashion is wide or narrow, long or short, or universal, just as we choose to make it; but if you expect the publisher of a Fashion magazine to know any thing of ladies' toilets, you have "waked up the wrong passenger"—upon the principle that, where "shoes are made, the children go barefoot."

But I have some vague idea of beauty. I know there are beautiful roses that breathe their sweetness, and I see sweet, breathing roses before me. Such-roses are always beautiful! See-roses have become the rage with us, and "So-rosis" will always *be fashionable.*

The Fashions, with the Press, rule everything and everywhere. The latter, notwithstanding its *heavy stereotype* "forms," has its *types* of fashion.

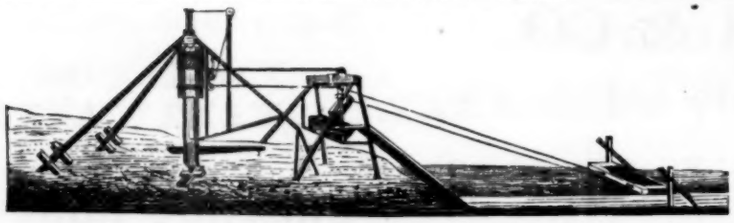
Its *long primers* make *standard works*, and are *copied, corrected*, and *proved* according to the *index* of Fashion. And among its most cherished jewels are the *diamond, agate*, and *pearl.*

Every "Mail," and every "Courier and Enquirer," demands the latest styles, and each "Revolution" of this ponderous *engine* of public opinion, though susceptible to every *spark* of intelligence, and "pressed" and clamped with iron "bolts and bars," yet with a tremendous energy, rapidly throws off its *winding-sheets*, which are widely "Heralded" to the "World"—precursor of the "Times" coming, to be criticised at the just "Tribunes" of the people, as the rising "Sun." that "shines for all," and the glittering "Stars" of the "Nation." All join to shed their "Independent" light on this "Standard" of "Christian Union," while distant "Mercury," like "Putnam" of old, "Dispatches" its fashions to every "Hearth and Home" in the "Western World." Our "Day Books" and "Ledgers" copy all the rules and points for each "Citizen," which are followed by numerous "Telegrams" or go by "Post," to "Express" the "News" of the latest modes to every "Imperialist" and "Democrat," and to every *veteran* "Observer" on every "River-Side" throughout our regenerated "Republic" as the whole of "Life Illustrated."

Each "Methodist," "Quaker," "Protestant Churchman," "Liberal Christian," and "Evangelist" is more or less imbued with the "Spirit of the Times;" while a new "Casket" is being "Packed-hard monthly" with "Literary Gems" that have become all the rage as "Fireside Companions."

Though all of Fashion's reign is not recorded by every "Scientific American," yet our "Rural New Yorkers," and every "Working Farmer," with a "Galaxy" of other "Eclectic" "Agriculturists," have their "Home Journal" and a "Round Table," near the "Chimney Corner," where "Literary Albums" are profusely "Illustrated Monthly" with its "Mirror of Fashions," as an appropriate "Tablet" for "Young America," while a "Harper" is playing for "Hours at Home" with a whole "Bazaar of Fashions."—*Demorest's Monthly for January.*

The above toast is worthy of "*Punch.*" But as it is addressed to those who need *more rest* than "*Our Young Folks*" the "*Old American Farmer*" would inform those who are advancing "*Onward*" from the "*Nursery*," that "*Good Words for the Young*," and "*Good Health*," can be found "*Every Saturday*" at the "*Children's Hour*" in the "*Home Circle*," or "*Once a Month*," *in these columns.*—ED.



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"I had it worked in the presence of several gentlemen, just to see the 'modus operandi,' and to be satisfied of the power and efficiency of the machine; and two mules of medium size appeared to have sufficient power to deliver on the shore a bucket full, equivalent to a cart load, in about six minutes. The mud at that trial was dropped on the creek bank. The mules were awkward and shy of the strangers present, and the hands were awkward at the novel occupation. We brought on shore about fifteen cart loads, and I feel entirely confident that I shall not be disappointed in the machine when it is put at full and regular work. Some of our farmers who have taken advantage of low tides and ice in the creeks to obtain small quantities of this mud, think it a very valuable manure; indeed that opinion appears to be universal here, but as the machine is of recent invention, and only a few have been erected, there has not been time to test the actual value of the mud as a fertilizer."

Having tested the machine, he writes under date of 27th July, 1860:

"Having successfully tested the working of your Mud Lifter, I have the further pleasure of testifying to the efficacy of the mud. You may remember that in December last, when the machine was first erected, we lifted some twenty loads of mud with it from the bottom of a salt water cove. This was acted on by the frost, and this spring was put on a point of thin land, in my corn field, where I never have had a vigorous crop of any sort, but now the land on which the mud was applied has a dark green, and vigorous growth of corn, entirely superior to the adjoining land, although the land undressed with mud is rather better, and both had the same dressing of shell marl. In this case the mud has had most unmistakably a profitable effect The land is a yellow clay loam."

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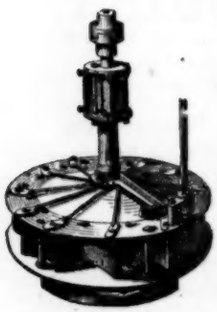

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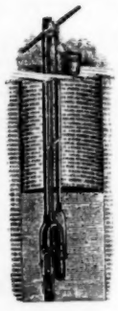

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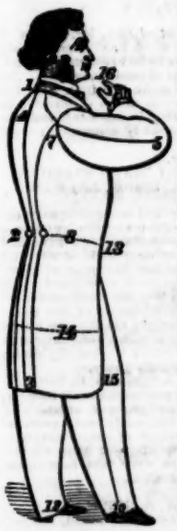

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